

CERES Systems Engineering Committee

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Charter: Serve as a forum for resolving issues which affect more than one working group. Report to CERES Data Management Team

October 14, 1999, 9:00 am

The SE committee met with Vertley Hopson, Walt Miller, Tim Murray, Erika Geier, and Carol Tolson to discuss the changes that Clouds and Convolution would like to make for Terra processing at the LaTIS DAAC. The desired processing scenario is to process Clouds one time and Convolution twice, once for each of the Terra instruments, if both exist at the same time. I will highlight the items of information, the items of concern and the decisions that were made. [New environment parameters supplied by LaTIS will be: \$SAT = Satellite, \$INST = Instrument, \$IMAG = Imager].

- The same PGE4.1-4.1P1 will be used for both TRMM and Terra processing.
- The environment parameter 'INST' will contain the corresponding Instrument or Instruments to be processed. For example: TRMM, 'INST = PFM', for Terra, 'INST = FM1+FM2', or 'INST = NONE' if Clouds is to process, and Convolution is NOT.
- The PGE ASCII File Generator script will be enhanced to first check for the existence of 'all' IES files requested through the 'INST' parameter, warn the Operator if some IES files are missing, and ask for permission to process (y/n).
- SS4_1, SamplingStrategy for Clouds, definition will not change. For example: TRMM, 'SS4_1 = TRMM-VIRS', for Terra, 'SS4_1 = Terra-MODIS'
- SS4_4, SamplingStrategy for Convolution, will be unchanged for TRMM, for example:
 - if 'INST = PFM', then 'SS4_4 = TRMM-PFM-VIRS'For Terra, this parameter will be unchanged when processing one, and only one, Instrument:
 - if 'INST = FM1', then 'SS4_4 = Terra-FM1-MODIS'
 - if 'INST = FM2', then 'SS4_4 = Terra-FM2-MODIS'For both TRMM and Terra, if Clouds is to be executed, and Convolution is NOT, where: 'INST = NONE', SS4_4 will be set to \$SAT-\$IMAG, by default.
- When 'INST = FM1+FM2', now SS4_4 will take on a new meaning. The SS4_4 value will be dependent on the 'INST' value, and will **only** be used for the PCFin, PCF, and Log files. for example: if 'INST = FM1+FM2', then 'SS4_4 = FM1+FM2'. All other output filenames will be constructed using the Satellite and Imager from the SS4_1 parameter and each individual Instrument name parsed from the 'INST' parameter. **All Instrument related output files** will be **unique** for each Instrument. For example: there will exist 2 sets of SSFIs: CER_SSFI_Terra-FM1-MODIS_..., and CER_SSFI_Terra-FM2-MODIS_....
- Clouds and Convolution Exit Codes were discussed and resolved. The following values and actions will be used: [*Note: 4_1 epilogue - Clouds Files, 4_4 epilogue - Convolution Files]

Table 1: PGE4.1-4.1P1 Exit Code Definition

Error Code	Clouds	Convolution	Target PGEs	File Disposition*
0	OK	OK	4.1-4.2P1, 4.5-6.1P1	run: 4_1 epilogue and 4_4 epilogue
200	OK	1. not executed, or 2. IES input, but NO footprints for output.	4.1-4.2P1	run: 4_1 epilogue
201	OK	OK [2 Instruments were expected, but only one was found.]	4.1-4.2P1, 4.5-6.1P1	run: 4_1 epilogue and 4_4 epilogue
202	bombed	N/A	N/A	send all files to: /ERROR
203	OK	bombed	4.1-4.2P1	run: 4_1 epilogue and send all files to: /ERROR

- Inversion PGE4.5-6.1P1 will be required to change their logic in the ASCII File Generator script to key on the individual input environment parameters: ‘SAT’, ‘INST’, and ‘IMAG’, as supplied by the DAAC, rather than the SS4_4 parameter for the input source.
- **Concerns:** The LaTIS Production Team will investigate the epilogue logic to resolve if they will be able to support:
 1. Two (2) SamplingStrategies (SS) for the 4_1 epilogue [‘Terra-MODIS’, ‘FM1+FM2’],
 2. Three (3) SamplingStrategies (SS), for the 4_4 epilogue [‘FM1+FM2’, ‘Terra-FM1-MODIS’, and ‘Terra-FM2-MODIS’], within one PGE execution,
 3. Parameter ‘INST’ containing valid values: ‘NONE’ and ‘FM1+FM2’

‘New’ and ‘Completely Generic’ Test Plan

The committee also met with Denise Cooper, Carol Tolson, Tammy Ayers, and Carla Franklin to discuss the ‘new’ and ‘completely generic’ Test Plan for Instrument. Comments were made on the readability and accuracy of the document. Denise will work with Jill to iron out the internal script contents related to the use of ‘CODINE’. Tammy and Carla will perform a ‘dry run’ on all aspects of the Test Plan. Their comments will then be presented to the committee and a final decision will be made on publishing the Instrument Test Plan. With the prospect that a generic Test Plan may not be altered between CM deliveries, the following decision was made: **Notation must be made on the Delivery Memo stating the Test Plan’ Release/Version and Date. The same information should be included for the Operator’s Manual.** The committee will look at the Delivery Memo template to determine if a format change is required.

Meeting adjourned 11:30 pm mvm